

**Amendments to the Claims:**

Please amend claim 74 and cancel claims 76-77. This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1-73 (canceled)

1           74 (currently amended): A probe for laser desorption/ionization mass  
2 spectrometry, wherein the probe comprises at least one sample presenting surface and a moiety  
3 that binds to biotin immobilized by chemical bonding to the sample presenting surface, wherein  
4 the moiety on the sample presenting surface is bound to the biotin group of at least one  
5 biotinylated protein, and wherein the probe further comprises a matrix.

1           75 (previously presented): The probe of claim 74, wherein the moiety binds  
2 biotin with an affinity constant of  $K_a = 10^{15} \text{ M}^{-1}$ .

76-77 (canceled)

1           78 (previously presented): The probe of claim 74, wherein the sample presenting  
2 surface comprises two or more moieties that bind to biotin arranged in a predetermined array.

1           79 (previously presented): The probe of claim 74, wherein the moiety that binds  
2 to biotin is selected from the group consisting of streptavidin and avidin.

1           80 (previously presented): The probe of claim 74, wherein the moiety is  
2 covalently bonded to the sample presenting surface.

1           81 (previously presented): A method comprising the steps of:  
2           a) providing a probe comprising at least one sample presenting surface and a  
3 moiety that binds to biotin immobilized by chemical bonding to the sample presenting surface;  
4           b) contacting the probe with at least one biotinylated protein under conditions  
5 allowing the biotin group to bind to the moiety that binds to biotin; and  
6           c) performing laser desorption/ionization mass spectrometry on the proteins  
7 bound on the surface of the probe.

1           82 (previously presented): The method of claim 81, further comprising after step  
2 b) the step of:  
3           washing to remove unbound molecules from the probe.

1           83 (previously presented): The method of claim 81, wherein the moiety binds  
2 biotin with an affinity constant of  $K_a = 10^{15} \text{ M}^{-1}$ .

1           84 (previously presented): The method of claim 81, wherein the probe comprises  
2 two or more moieties that bind to biotin arranged in a predetermined array.

1           85 (previously presented): The method of any one of claims 81-84, wherein the  
2 moiety is covalently bonded to the sample presenting surface.

1           86 (previously presented): The method of any one of claims 81-84, further  
2 comprising the step of applying a matrix after allowing the biotin group to bind to the moiety  
3 that binds to biotin.

1           87 (previously presented): The method of any one of claims 81 or 82, wherein  
2 the moiety that binds to biotin is selected from the group consisting of streptavidin and avidin.

1           88 (previously presented): The method of claim 87, wherein the moiety is  
2 covalently bonded to the sample presenting surface.

1                   89 (previously presented): The method of claim 87, further comprising the step  
2 of applying a matrix after allowing the biotin group to bind to the moiety that binds to biotin.

1                   90 (previously presented): A mass spectrometry apparatus comprising:  
2                   a) a probe comprising at least one sample presenting surface and a moiety that  
3 binds to biotin immobilized by chemical bonding to the sample presenting surface;  
4                   b) an energy source that directs laser energy to the sample presenting surface for  
5 desorbing and ionizing a biotinylated protein captured by the moiety; and  
6                   c) a detector that detects the desorbed, ionized biotinylated protein.

1                   91 (previously presented): The apparatus of claim 90, further comprising:  
2                   d) a spectrometer tube into which ionized biotinylated protein is accelerated; and  
3                   e) means for applying an accelerating electrical potential to the desorbed, ionized  
4 protein; wherein the mass spectrometer is a time-of-flight mass spectrometer.

1                   92 (previously presented): The apparatus of claim 91, further comprising:  
2                   f) vacuum means for applying a vacuum to the interior of the tube.

1                   93 (previously presented): The apparatus of claim 90, wherein the detector  
2 comprises an electron multiplier.

1                   94 (previously presented): The apparatus of claim 90, wherein the moiety binds  
2 biotin with an affinity constant of  $K_a = 10^{15} \text{ M}^{-1}$ .

1                   95 (previously presented): The apparatus of claim 90, wherein the moiety on the  
2 probe is bound to the biotin group of at least one biotinylated protein.

1                   96 (previously presented): The apparatus of claim 95, wherein the probe further  
2 comprises a matrix.

1                   97 (previously presented): The apparatus of claim 90, wherein the probe  
2 comprises two or more moieties that bind to biotin arranged in a predetermined array.

1                   98 (previously presented): The apparatus of claim 90, wherein the moiety that  
2 binds to biotin is selected from the group consisting of streptavidin and avidin.

1                   99 (previously presented): The apparatus of claim 91, wherein the moiety that  
2 binds to biotin is selected from the group consisting of streptavidin and avidin.

1                   100 (previously presented): The apparatus of claim 92, wherein the moiety that  
2 binds to biotin is selected from the group consisting of streptavidin and avidin.

1                   101 (previously presented): The apparatus of claim 93, wherein the moiety that  
2 binds to biotin is selected from the group consisting of streptavidin and avidin.

1                   102 (previously presented): The apparatus of claim 90, wherein the moiety is  
2 covalently bonded to the sample presenting surface.

1                   103 (previously presented): The apparatus of claim 95, wherein the moiety is  
2 covalently bonded to the sample presenting surface.

1                   104 (previously presented): The apparatus of claim 96, wherein the moiety is  
2 covalently bonded to the sample presenting surface.

1                   105 (previously presented): The apparatus of claim 98, wherein the moiety is  
2 covalently bonded to the sample presenting surface.

1                   106 (previously presented): The apparatus of claim 99, wherein the moiety is  
2 covalently bonded to the sample presenting surface.

1                   107 (previously presented): The apparatus of claim 100, wherein the moiety is  
2 covalently bonded to the sample presenting surface.

1                   108 (previously presented): The apparatus of claim 101, wherein the moiety is  
2 covalently bonded to the sample presenting surface.

1                   109 (previously presented): The apparatus of claim 90, wherein the energy  
2 source is energy from a nitrogen laser or an Nd-YAG laser.